

Fig. 1 [Prior Art]

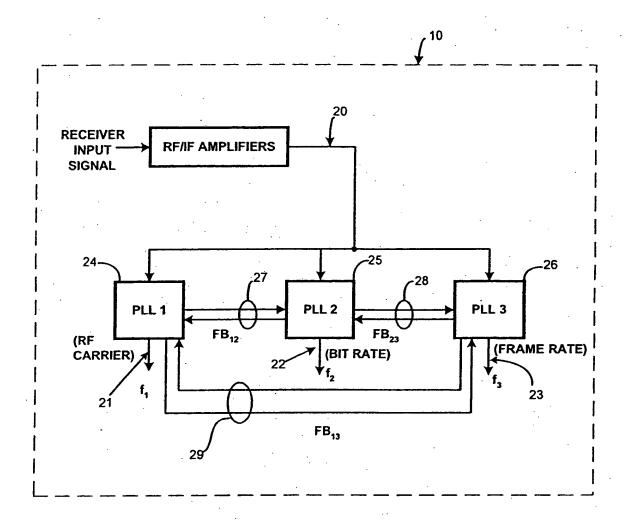


Fig. 2



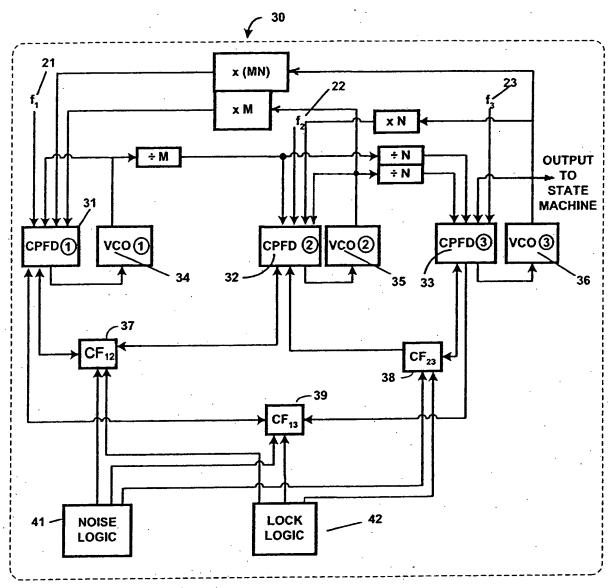
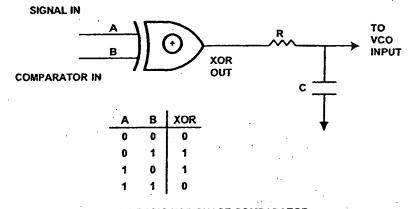
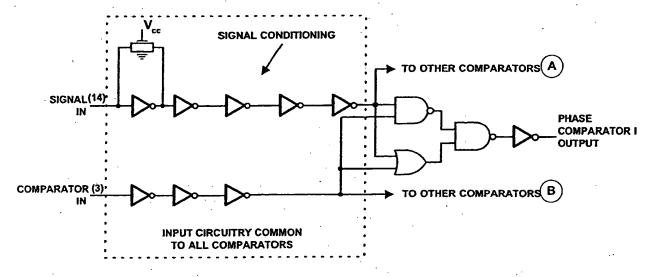


Fig. 3

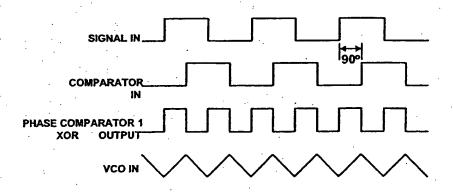




(A) BASIC XOR PHASE COMPARATOR



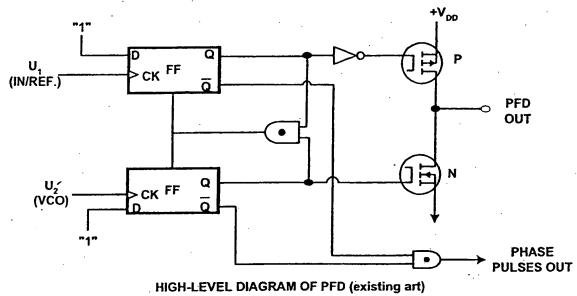
(B) DETAILED ON-CHIP IC CIRCUITRY IN 74HC4046

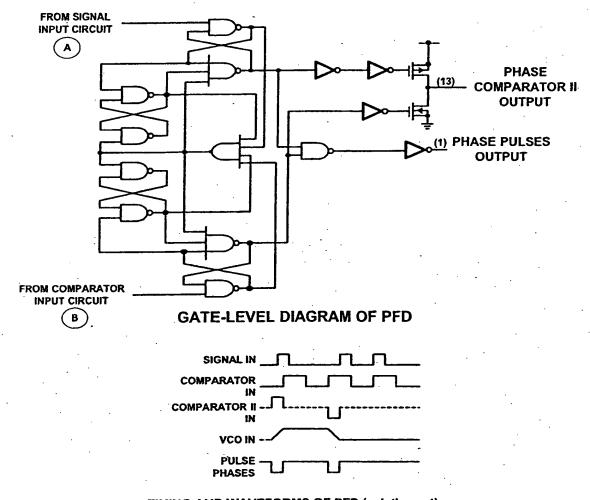


(C) TYPICAL XOR DETECTOR WAVEFORMS

Fig. 4 (Prior Art)







TIMING AND WAVEFORMS OF PFD (existing art)

Fig. 4 cont. (Prior Art)

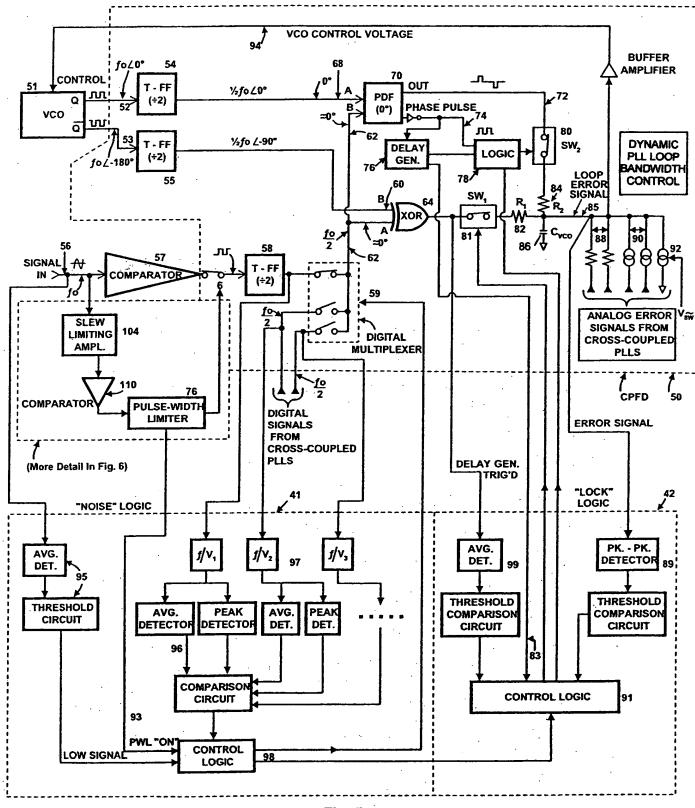


Fig. 5

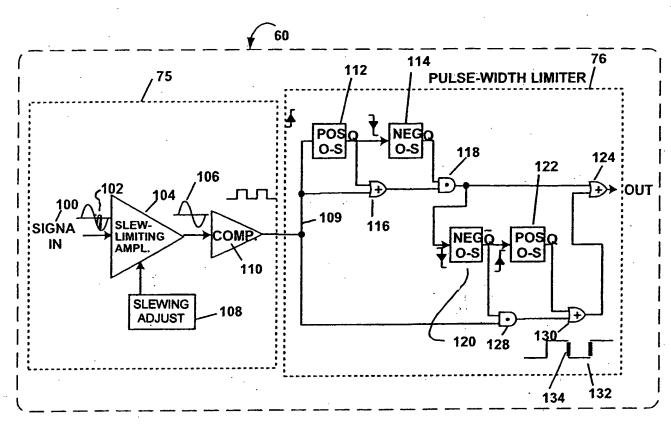


Fig. 6



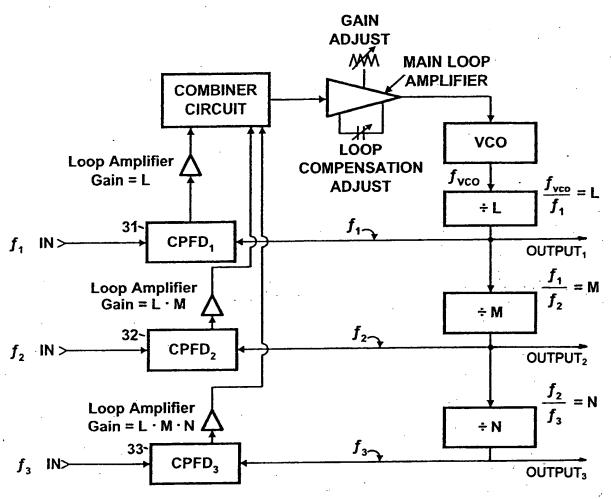


Fig. 7